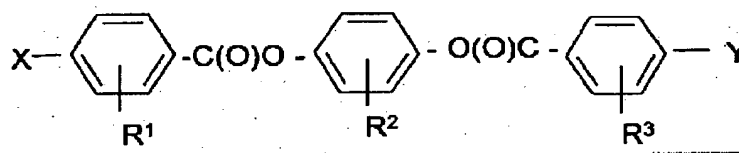


Amendments to the Claims:

1. (Canceled).
2. (Currently amended) ~~The method of claim 76~~ A method for producing a blend comprising randomly substituted mesogens, said method comprising:
providing one or more platform molecules have the following general structure:



wherein

X comprises a terminal functionality and Y comprises a polymerizable group in about 50 wt% or more of said blend of randomly substituted mesogens, and at least one member selected from the group consisting of X and Y comprises one or more spacer groups;

R² is a bulky organic group whereby, when both X and Y are reacted with polymerizable groups to produce polymerizable mesogens, R² provides sufficient steric hindrance to achieve a nematic state at room temperature while suppressing crystallinity of said polymerizable mesogens at room temperature; and,

R¹ and R³ are selected from groups less bulky than R²; and independently substituting at least one member selected from the group

19 consisting of X and Y with a polymerizable group, thereby producing a
20 blend of randomly substituted mesogens.

1 3. (Currently amended) The method of claim 76 wherein X comprises a terminal
2 functionality and Y comprises a polymerizable group in about 60 wt.% of said blend of
3 randomly substituted mesogens.

1 4. (Currently amended) The method of claim 76 wherein X comprises a terminal
2 functionality and Y comprises a polymerizable group in about 70 wt.% of said blend of
3 randomly substituted mesogens.

1 5. (Currently amended) The method of claim 76 wherein said polymerizable
2 groups are selected from the group consisting of acryloyloxy groups, methacryloyloxy
3 groups, and acryloyloxy alkoxy groups, and methacryloyloxy alkoxy
4 groups comprising an alkyl moiety having from about 2 to about 12 carbon atoms and
5 comprising CH₂ groups, wherein one or more of said CH₂ groups independently can be
6 substituted by oxygen, sulfur, or an ester group; provided that at least 2 carbon atoms
7 separate said oxygen or said ester group.

1 6. (Currently amended) The method of claim 2 wherein said polymerizable
2 groups are selected from the group consisting of acryloyloxy groups, methacryloyloxy
3 groups, and acryloyloxy alkoxy groups, and methacryloyloxy alkoxy
4 groups comprising an alkyl moiety having from about 2 to about 12 carbon atoms and
5 comprising CH₂ groups, wherein one or more of said CH₂ groups independently can be
6 substituted by oxygen, sulfur, or an ester group; provided that at least 2 carbon atoms
7 separate said oxygen or said ester group.

1 7. (Currently amended) The method of claim 4 wherein said polymerizable
2 groups are selected from the group consisting of acryloyloxy groups, methacryloyloxy
3 groups, ~~and acryloyloxy alkoxy groups, and methacryloyloxy alkoxy~~ methacryloyloxy alkoxy
4 groups comprising an alkyl moiety having from about 2 to about 12 carbon atoms and
5 comprising CH₂ groups, wherein one or more of said CH₂ groups independently can be
6 substituted by oxygen, sulfur, or an ester group; provided that at least 2 carbon atoms
7 separate said oxygen or said ester group.

1 8. (Original) The method of claim 76 wherein said polymerizable groups are
2 selected from the group consisting of cinnamoyloxy groups, acryloyloxy groups,
3 methacryloyloxy groups, and acryloyloxy alkoxy and methacryloyloxy alkoxy groups
4 comprising an alkyl moiety having from about 2 to about 12 carbon atoms, thiol alkoxy
5 groups comprising an alkyl moiety having from about 2 to about 12 carbon atoms, said alkyl
6 moiety comprising CH₂ groups, wherein one or more of said CH₂ groups independently can
7 be substituted by oxygen, sulfur, or an ester group; provided that at least 2 carbon atoms
8 separate said oxygen or said ester group.

1 9. (Original) The method of claim 2 wherein said polymerizable groups are
2 selected from the group consisting of cinnamoyloxy groups, acryloyloxy groups,
3 methacryloyloxy groups, and acryloyloxy alkoxy and methacryloyloxy alkoxy groups
4 comprising an alkyl moiety having from about 2 to about 12 carbon atoms, thiol alkoxy
5 groups comprising an alkyl moiety having from about 2 to about 12 carbon atoms, said alkyl
6 moiety comprising CH₂ groups, wherein one or more of said CH₂ groups independently can
7 be substituted by oxygen, sulfur, or an ester group; provided that at least 2 carbon atoms

8 separate said oxygen or said ester group.

1 10. (Original) The method of claim 4 wherein said polymerizable groups are
2 selected from the group consisting of cinnamoyloxy groups, acryloyloxy groups,
3 methacryloyloxy groups, and acryloyloxy alkoxy and methacryloyloxy alkoxy groups
4 comprising an alkyl moiety having from about 2 to about 12 carbon atoms, thiol alkoxy
5 groups comprising an alkyl moiety having from about 2 to about 12 carbon atoms, said alkyl
6 moiety comprising CH₂ groups, wherein one or more of said CH₂ groups independently can
7 be substituted by oxygen, sulfur, or an ester group; provided that at least 2 carbon atoms
8 separate said oxygen or said ester group.

1 11. (Original) The method of claim 76 wherein said polymerizable groups are
2 selected from the group consisting of acryloyloxy alkoxy groups and methacryloyloxy
3 alkoxy groups.

1 12. (Original) The method of claim 2 wherein said polymerizable groups are
2 selected from the group consisting of acryloyloxy alkoxy groups and methacryloyloxy
3 alkoxy groups.

1 13. (Original) The method of claim 4 wherein said polymerizable groups are
2 selected from the group consisting of acryloyloxy alkoxy groups and methacryloyloxy
3 alkoxy groups.

1 14. (Original) The method of claim 76 wherein said polymerizable groups are
2 methacryloyloxy alkoxy groups.

1 15. (Original) The method of claim 2 wherein said polymerizable groups are
2 methacryloyloxy alkoxy groups.

1 16. (Original) The method of claim 4 wherein said polymerizable groups are
2 methacryloyloxy alkoxy groups.

1 17. (Original) The method of claim 76 wherein said terminal functionalities are
2 selected from the group consisting of hydroxyl groups, amino groups, sulfhydryl groups,
3 halogen atoms, alkoxy groups, and spacer groups.

1 18. (Original) The method of claim 2 wherein said terminal functionalities are
2 selected from the group consisting of hydroxyl groups, amino groups, sulfhydryl groups,
3 halogen atoms, alkoxy groups, and spacer groups.

1 19. (Original) The method of claim 4 wherein said terminal functionalities are
2 selected from the group consisting of hydroxyl groups, amino groups, sulfhydryl groups,
3 halogen atoms, alkoxy groups, and spacer groups.

1 20. (Original) The method of claim 5 wherein said terminal functionalities are
2 selected from the group consisting of hydroxyl groups, amino groups, sulfhydryl groups,
3 halogen atoms, alkoxy groups, and spacer groups.

1 21. (Original) The method of claim 6 wherein said terminal functionalities are
2 selected from the group consisting of hydroxyl groups, amino groups, sulfhydryl groups,
3 halogen atoms, alkoxy groups, and spacer groups.

1 22. (Original) The method of claim 7 wherein said terminal functionalities are
2 selected from the group consisting of hydroxyl groups, amino groups, sulfhydryl groups,
3 halogen atoms, alkoxy groups, and spacer groups.

1 23. (Original) The method of claim 8 wherein said terminal functionalities are
2 selected from the group consisting of hydroxyl groups, amino groups, sulfhydryl groups,

3 halogen atoms, alkoxy groups, and spacer groups.

1 24. (Original) The method of claim 9 wherein said terminal functionalities are
2 selected from the group consisting of hydroxyl groups, amino groups, sulfhydryl groups,
3 halogen atoms, alkoxy groups, and spacer groups.

1 25. (Original) The method of claim 10 wherein said terminal functionalities are
2 selected from the group consisting of hydroxyl groups, amino groups, sulfhydryl groups,
3 halogen atoms, alkoxy groups, and spacer groups.

1 26. (Original) The method of claim 11 wherein said terminal functionalities are
2 selected from the group consisting of hydroxyl groups, amino groups, sulfhydryl groups,
3 halogen atoms, alkoxy groups, and spacer groups.

1 27. (Original) The method of claim 13 wherein said terminal functionalities are
2 selected from the group consisting of hydroxyl groups, amino groups, sulfhydryl groups,
3 halogen atoms, alkoxy groups, and spacer groups.

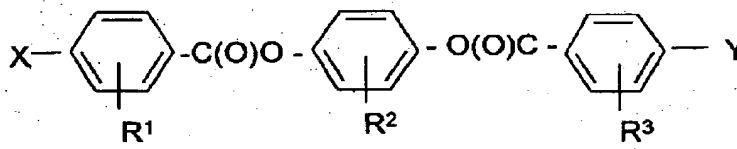
1 28. (Original) The method of claim 14 wherein said terminal functionalities are
2 selected from the group consisting of hydroxyl groups, amino groups, sulfhydryl groups,
3 halogen atoms, alkoxy groups, and spacer groups.

1 29. (Original) The method of claim 16 wherein said terminal functionalities are
2 selected from the group consisting of hydroxyl groups, amino groups, sulfhydryl groups,
3 halogen atoms, alkoxy groups, and spacer groups.

1 30. (Canceled).

1 31. (Currently amended) ~~The method of claim 76 wherein said blend has~~ A method
2 for producing a blend comprising randomly substituted mesogens, said method comprising:

providing one or more platform molecules have the following general structure:



wherein:

at least one member selected from the group consisting of X and Y

comprises one or more spacer groups;

R^2 is a bulky organic group whereby, when both X and Y are

reacted with polymerizable groups to produce

polymerizable mesogens, R^2 provides sufficient steric

hindrance to achieve a nematic state at room temperature

while suppressing crystallinity of said polymerizable

mesogens at room temperature; and,

R^1 and R^3 are selected from groups less bulky than R^2 ; and

independently substituting at least one member selected from the group

consisting of X and Y with a polymerizable group, thereby producing a

blend of randomly substituted mesogens having a T_c is of from about 20

°C to about 37 °C.

32. (Original) The method of claim 2 wherein said blend has a T_c is from about 20 °C to about 37 °C.

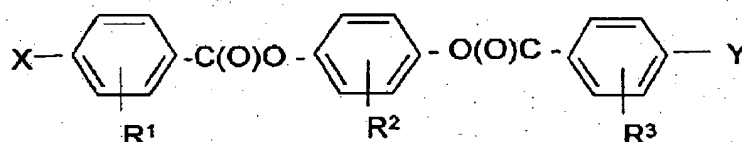
33. (Original) The method of claim 5 wherein said blend has a T_c is from about 20 °C to about 37 °C.

1 34. (Original) The method of claim 6 wherein said blend has a T_c is from about
2 20 °C to about 37 °C.

1 35 - 75. (Canceled).

1 76. (New) A method for producing a blend comprising randomly substituted
2 mesogens, said method comprising:

3 providing one or more platform molecules have the following general structure:



4
5 wherein:

6 at least one member selected from the group consisting of X and Y
7 comprises one or more spacer groups;

8 R^2 is a bulky organic group whereby, when both X and Y are
9 reacted with polymerizable groups to produce
10 polymerizable mesogens, R^2 provides sufficient steric
11 hindrance to achieve a nematic state at room temperature
12 while suppressing crystallinity of said polymerizable
13 mesogens at room temperature; and,

14 R^1 and R^3 are selected from groups less bulky than R^2 ; and
15 independently substituting at least one member selected from the group
16 consisting of X and Y with a polymerizable group, thereby producing a
17 blend of randomly substituted mesogens.

1 77. (New) The method of claim 31 wherein X comprises a terminal functionality
2 and Y comprises a polymerizable group in about 50 wt.% of said blend of randomly
3 substituted mesogens.

1 78. (New) The method of claim 31 wherein X comprises a terminal functionality
2 and Y comprises a polymerizable group in about 60 wt.% of said blend of randomly
3 substituted mesogens.

1 79. (New) The method of claim 31 wherein X comprises a terminal functionality
2 and Y comprises a polymerizable group in about 70 wt.% of said blend of randomly
3 substituted mesogens.

1 80. (New) The method of claim 31 wherein said polymerizable groups are
2 selected from the group consisting of acryloyloxy groups, methacryloyloxy groups,
3 acryloyloxy alkoxy groups, and methacryloxyalkoxy groups comprising an alkyl moiety
4 having from about 2 to about 12 carbon atoms and comprising CH₂ groups, wherein one or
5 more of said CH₂ groups independently can be substituted by oxygen, sulfur, or an ester
6 group; provided that at least 2 carbon atoms separate said oxygen or said ester group.

1 81. (New) The method of claim 77 wherein said polymerizable groups are
2 selected from the group consisting of acryloyloxy groups, methacryloyloxy groups,
3 acryloyloxy alkoxy groups, and methacryloxyalkoxy groups comprising an alkyl moiety
4 having from about 2 to about 12 carbon atoms and comprising CH₂ groups, wherein one or
5 more of said CH₂ groups independently can be substituted by oxygen, sulfur, or an ester
6 group; provided that at least 2 carbon atoms separate said oxygen or said ester group.

1 82. (New) The method of claim 78 wherein said polymerizable groups are

2 selected from the group consisting of acryloyloxy groups, methacryloyloxy groups,
3 acryloyloxy alkoxy groups, and methacryloxyalkoxy groups comprising an alkyl moiety
4 having from about 2 to about 12 carbon atoms and comprising CH₂ groups, wherein one or
5 more of said CH₂ groups independently can be substituted by oxygen, sulfur, or an ester
6 group; provided that at least 2 carbon atoms separate said oxygen or said ester group.

1 83. (New) The method of claim 79 wherein said polymerizable groups are
2 selected from the group consisting of cinnamoyloxy groups, acryloyloxy groups,
3 methacryloyloxy groups, acryloyloxy alkoxy groups and methacryloyloxy alkoxy groups
4 comprising an alkyl moiety having from about 2 to about 12 carbon atoms, thiol alkoxy
5 groups comprising an alkyl moiety having from about 2 to about 12 carbon atoms, said alkyl
6 moiety comprising CH₂ groups, wherein one or more of said CH₂ groups independently can
7 be substituted by oxygen, sulfur, or an ester group; provided that at least 2 carbon atoms
8 separate said oxygen or said ester group.

1 84. (New) The method of claim 31 wherein said polymerizable groups are
2 selected from the group consisting of acryloyloxy alkoxy groups and methacryloyloxy
3 alkoxy groups.

1 85. (New) The method of claim 77 wherein said polymerizable groups are
2 selected from the group consisting of acryloyloxy alkoxy groups and methacryloyloxy
3 alkoxy groups.

1 86. (New) The method of claim 78 wherein said polymerizable groups are
2 selected from the group consisting of acryloyloxy alkoxy groups and methacryloyloxy
3 alkoxy groups.

1 87. (New) The method of claim 79 wherein said polymerizable groups are
2 selected from the group consisting of acryloyloxy alkoxy groups and methacryloyloxy
3 alkoxy groups.

1 88. (New) The method of claim 31 wherein said polymerizable groups are
2 methacryloyloxy alkoxy groups.

1 89. (New) The method of claim 77 wherein said polymerizable groups are
2 methacryloyloxy alkoxy groups.

1 90. (New) The method of claim 78 wherein said polymerizable groups are
2 methacryloyloxy alkoxy groups.

1 91. (New) The method of claim 79 wherein said polymerizable groups are
2 methacryloyloxy alkoxy groups.

1 92. (New) The method of claim 31 wherein said terminal functionalities are
2 selected from the group consisting of hydroxyl groups, amino groups, sulfhydryl groups,
3 halogen atoms, alkoxy groups, and spacer groups.

1 93. (New) The method of claim 77 wherein said terminal functionalities are
2 selected from the group consisting of hydroxyl groups, amino groups, sulfhydryl groups,
3 halogen atoms, alkoxy groups, and spacer groups.

1 94. (New) The method of claim 78 wherein said terminal functionalities are
2 selected from the group consisting of hydroxyl groups, amino groups, sulfhydryl groups,
3 halogen atoms, alkoxy groups, and spacer groups.

1 95. (New) The method of claim 79 wherein said terminal functionalities are
2 selected from the group consisting of hydroxyl groups, amino groups, sulfhydryl groups,

3 halogen atoms, alkoxy groups, and spacer groups.

1 96. (New) The method of claim 80 wherein said terminal functionalities are
2 selected from the group consisting of hydroxyl groups, amino groups, sulfhydryl groups,
3 halogen atoms, alkoxy groups, and spacer groups.

1 97. (New) The method of claim 84 wherein said terminal functionalities are
2 selected from the group consisting of hydroxyl groups, amino groups, sulfhydryl groups,
3 halogen atoms, alkoxy groups, and spacer groups.

1 98. (New) The method of claim 85 wherein said terminal functionalities are
2 selected from the group consisting of hydroxyl groups, amino groups, sulfhydryl groups,
3 halogen atoms, alkoxy groups, and spacer groups.

1 99. (New) The method of claim 86 wherein said terminal functionalities are
2 selected from the group consisting of hydroxyl groups, amino groups, sulfhydryl groups,
3 halogen atoms, alkoxy groups, and spacer groups.

1 100. (New) The method of claim 87 wherein said terminal functionalities are
2 selected from the group consisting of hydroxyl groups, amino groups, sulfhydryl groups,
3 halogen atoms, alkoxy groups, and spacer groups.

1 101. (New) The method of claim 88 wherein said terminal functionalities are
2 selected from the group consisting of hydroxyl groups, amino groups, sulfhydryl groups,
3 halogen atoms, alkoxy groups, and spacer groups.

1 102. (New) The method of claim 89 wherein said terminal functionalities are
2 selected from the group consisting of hydroxyl groups, amino groups, sulfhydryl groups,
3 halogen atoms, alkoxy groups, and spacer groups.

1 103. (New) The method of claim 90 wherein said terminal functionalities are
2 selected from the group consisting of hydroxyl groups, amino groups, sulfhydryl groups,
3 halogen atoms, alkoxy groups, and spacer groups.

1 104. (New) The method of claim 91 wherein said terminal functionalities are
2 selected from the group consisting of hydroxyl groups, amino groups, sulfhydryl groups,
3 halogen atoms, alkoxy groups, and spacer groups.